

## **AMENDMENTS**

### **In the Claims**

The following is a marked-up version of the claims with the language that is underlined (“    ”) being added and the language that contains strikethrough (“~~—~~”) being deleted:

1. (Currently Amended) A method comprising:
  - (A) receiving an email message from a simple mail transfer protocol (SMTP) server, the email message comprising:
    - (A1) a 32-bit string indicative of the length of the email message;
    - (A2) a text body;
    - (A3) an SMTP email address;
    - (A4) a domain name corresponding to the SMTP email address;
    - (A5) an attachment;
  - (B) tokenizing the text body to generate tokens representative of words in the text;
  - (C) tokenizing the SMTP email address to generate a token representative of the SMTP email address;
  - (D) tokenizing the domain name to generate a token that is representative domain name;
  - (E) tokenizing the attachment to generate a token that is representative of the attachment, wherein tokenizing comprises:
    - (E1) generating a 128-bit MD5 hash of the attachment;
    - (E2) appending the 32-bit string to the generated MD5 hash to produce a 160-bit number; and
    - (E3) UUencoding the 160-bit number to generate the token representative of the attachment;
  - (F) determining a probability value for each of the generated tokens;
  - (G) sorting the generated tokens in accordance with the corresponding determined spam

probability value;

- (G) (H) selecting a predefined number of interesting tokens, the interesting tokens being the generated tokens having the greatest non-neutral probability values;
- (H) (I) performing a Bayesian analysis on the selected interesting tokens to generate a spam probability; and
- (I) (J) categorizing the email message as a function of the generated spam probability.

2. – 5. (Canceled)

6. (Currently Amended) A method comprising:
- receiving an email message comprising a text body, an SMTP email address, an attachment, and a domain name corresponding to the SMTP email address;
  - tokenizing the SMTP email address to generate a token representative of the SMTP email address;
  - tokenizing the attachment to generate a token that is representative of the attachment;
  - tokenizing the domain name to generate a token representative of the domain name;
- and
- determining a spam probability value from the generated ~~tokens~~; tokens; and
  - sorting the generated tokens in accordance with the corresponding determined spam probability value.

7. – 10. (Canceled)

11. (Previously Presented) The method of claim 6, wherein determining the spam probability comprises:
- assigning a spam probability value to the token representative of the SMTP email

address;

assigning a spam probability value to the token representative of the domain name; and  
generating a Bayesian probability value using the spam probability values assigned to  
the tokens.

12. (Previously Presented) The method of claim 11, wherein determining the spam  
probability further comprises:

comparing the generated Bayesian probability value with a predefined threshold value.

13. (Previously Presented) The method of claim 12, wherein determining the spam  
probability further comprises:

categorizing the email message as spam in response to the Bayesian probability value  
being greater than the predefined threshold.

14. (Previously Presented) The method of claim 12, wherein determining the spam  
probability further comprises:

categorizing the email message as non-spam in response to the Bayesian probability  
value being not greater than the predefined threshold.

15. (Canceled)

16. (Previously Presented) The method claim 6, wherein receiving the email  
message further comprises:

receiving an email message including a text body.

17. (Previously Presented) The method of claim 16, further comprising:

tokenizing the words in the text body to generate tokens representative of the words in the text body.

18. (Canceled)

19. (Previously Presented) The method of claim 17, wherein determining the spam probability comprises:

assigning a spam probability value to each of the tokens representative of the words in the text body;

assigning a spam probability value to the token representative of the attachment; and  
generating a Bayesian probability value using the spam probability values assigned to the tokens.

20. (Previously Presented) The method of claim 19, wherein determining the spam probability further comprises:

comparing the generated Bayesian probability value with a predefined threshold value.

21. (Previously Presented) The method of claim 20, wherein determining the spam probability further comprises:

categorizing the email message as spam in response to the Bayesian probability value being greater than the predefined threshold.

22. (Previously Presented) The method of claim 20, wherein determining the spam probability further comprises:

categorizing the email message as non-spam in response to the Bayesian probability value being not greater than the predefined threshold.

23. (Currently Amended) A system comprising:

- email receive logic configured to receive an email message comprising an SMTP email address, a domain name corresponding to the SMTP email address, and an attachment;
- tokenize logic configured to tokenize the SMTP email address to generate a token representative of the SMTP email address;
- tokenize logic configured to tokenize the attachment to generate a token that is representative of the attachment;
- tokenize logic configured to tokenize the domain name to generate a token representative of the domain name; ~~and~~
- analysis logic configured to determine a spam probability value from the generated ~~tokens;~~ tokens; and
- sorting logic configured to sort the generated tokens in accordance with the corresponding determined spam probability value.

24. (Currently Amended) A system comprising:

- means for receiving an email message comprising an SMTP email address, a domain name corresponding to the SMTP email address, and an attachment;
- means for tokenizing the SMTP email address to generate a token representative of the SMTP email address;
- means for tokenizing the attachment to generate a token that is representative of the attachment;
- means for tokenizing the domain name to generate a token representative of the domain name; ~~and~~
- means for determining a spam probability value from the generated ~~tokens;~~ tokens; and
- means for sorting the generated tokens in accordance with the corresponding

determined spam probability value.

25. (Currently Amended) A computer-readable medium comprising:

computer-readable code adapted to instruct a programmable device to receive an email message comprising an SMTP email address, a domain name corresponding to the SMTP email address, and an attachment;

computer-readable code adapted to instruct a programmable device to tokenize the SMTP email address to generate a token representative of the SMTP email address;

computer-readable code adapted to instruct a programmable device to tokenize the attachment to generate a token that is representative of the attachment;

computer-readable code adapted to instruct a programmable device to tokenize the domain name to generate a token representative of the domain name; and

computer-readable code adapted to instruct a programmable device to determine a spam probability value from the generated ~~tokens~~ tokens; and

computer-readable code adapted to instruct a programmable device to sort the generated tokens in accordance with the corresponding determined spam probability value.

26. (Original) The computer-readable medium of claim 25, further comprising:

computer-readable code adapted to instruct a programmable device to assign a spam probability value to the token representative of the SMTP email address;

computer-readable code adapted to instruct a programmable device to assign a spam probability value to the token representative of the domain name; and

computer-readable code adapted to instruct a programmable device to generate a Bayesian probability value using the spam probability values assigned to the tokens.

27. (Original) The computer-readable medium of claim 26, further comprising:

computer-readable code adapted to instruct a programmable device to compare the generated Bayesian probability value with a predefined threshold value.

28. (Original) The computer-readable medium of claim 27, further comprising:  
computer-readable code adapted to instruct a programmable device to categorize the email message as spam in response to the Bayesian probability value being greater than the predefined threshold.

29. (Original) The computer-readable medium of claim 27, further comprising:  
computer-readable code adapted to instruct a programmable device to categorize the email message as non-spam in response to the Bayesian probability value being not greater than the predefined threshold.

30. (Currently Amended) A system comprising:  
email receive logic configured to receive an email message comprising an attachment;  
tokenize logic configured to tokenize the ~~entire~~ attachment to generate a token representative of the attachment; ~~and~~  
analysis logic configured to determine a spam probability value from the generated ~~token~~; token; and  
sort logic configured to sort the generated tokens in accordance with the corresponding spam probability value.

31. (Currently Amended) A system comprising:  
means for receiving an email message comprising an attachment;  
means for tokenizing the attachment to generate a token representative of the attachment; ~~and~~

means for determining a spam probability value from the generated ~~token~~; token; and  
means for sorting the generated tokens in accordance with the corresponding  
determined spam probability value.

32. (Currently Amended) A computer-readable medium comprising:  
computer-readable code adapted to instruct a programmable device to receive an email  
message comprising an attachment;  
computer-readable code adapted to instruct a programmable device to tokenize the  
entire attachment to generate a token representative of the attachment; and  
computer-readable code adapted to instruct a programmable device to determine a  
spam probability value from the generated ~~token~~; token; and  
computer-readable code adapted to instruct a programmable device to sort the  
generated tokens in accordance with the corresponding determined spam probability value.

33. (Original) The computer-readable medium of claim 32, further comprising:  
computer-readable code adapted to instruct a programmable device to receive an email  
message having a text body.

34. (Original) The computer-readable medium of claim 33, further comprising:  
computer-readable code adapted to instruct a programmable device to tokenize the  
words in the text body to generate tokens representative of the words in the text body.

35. (Original) The computer-readable medium of claim 34, further comprising:  
computer-readable code adapted to instruct a programmable device to assign a spam  
probability value to each of the tokens representative of the words in the text body;  
computer-readable code adapted to instruct a programmable device to assign a spam



probability value to the token representative of the attachment; and

computer-readable code adapted to instruct a programmable device to generate a Bayesian probability value using the spam probability values assigned to the tokens.

36. (Original) The computer-readable medium of claim 35, further comprising:  
computer-readable code adapted to instruct a programmable device to compare the generated Bayesian probability value with a predefined threshold value.

37. (Original) The computer-readable medium of claim 36, further comprising:  
computer-readable code adapted to instruct a programmable device to categorize the email message as spam in response to the Bayesian probability value being greater than the predefined threshold.

38. (Original) The computer-readable medium of claim 36, further comprising:  
computer-readable code adapted to instruct a programmable device to categorize the email message as non-spam in response to the Bayesian probability value being not greater than the predefined threshold.

39. (New) The method of claim 1, wherein the email is received at a computing device.